

**Peregrine<sub>xp</sub>**  
Instruction Manual

The Binocular-Specialists!

**STEINER** ®  
G E R M A N Y

USA, Canada & Caribbean






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## **Welcome to the future**

Congratulations, you have purchased one of the most optically and technologically advanced binoculars in the world. Designed into this product are six decades of experience in manufacturing binoculars for the highest demands as well as years of dedicated research. Now our revolutionary  $\chi$ pTechnology starts a new era of observation: Welcome to the future.

## DEAR NATURE AND OUTDOOR ENTHUSIAST,

forests, plains, deserts and mountains all have their secrets. Those who are looking to unlock these secrets, for adventure or to just enjoy nature have a need to know what is out there. This is what it takes to make your hike, birding adventure or hunt an unforgettable experience. The eye is the key: We can act to only what we see.

Your binocular features our new  $\chi$ pTechnology, creating a whole new level of viewing. For the first time a binocular will bring not only one of the key optical parameters of light transmission, color fidelity, sharpness and depth of field to highest levels but rather all four of them.

However, we at STEINER are convinced that it is more than technical excellence and high optical performance that is required to build a truly optimal binocular for our customers. You need to know the user specific requirements as well as the unique environmental characteristics of where the binoculars will be used. Binoculars need to be customized to the

situation, whether there are birds flying or animals hidden in cover which are almost invisible to the eye or whether glistening sunlight distorts the colors of nature.



*Carl Steiner President & Owner*

STEINER is passionately committed to the user's requirements. We have combined six decades of experience and research and development, for professionals and amateurs alike with a deep understanding of their needs. That's why fellow hunters, hikers, bird watchers and naturalists can be confident when having this STEINER  $\chi$ p binocular in their hands.

In the name of STEINER Optik and all employees I want to thank you for your trust in our binoculars.

Yours truly,

Carl Steiner

## WHAT REALLY MATTERS.

One of the most important parameters of a high-performance binocular is its light transmission, which means the amount of light that ultimately reaches the human eye. In low light conditions such as in rain, dusk or dawn a high light transmission can make a decisive difference.

However, light transmission does not always equal light transmission. Each binocular has many different values for light transmission, depending upon the wavelength of light (color). Conventional binoculars tend to deliver limited peak values only at a certain wavelength (for example: blue) but lose other colors' transmission (for example: red) of up to 30%. The result of such transmission peaks, are color distortions – therefore high peak values will not improve your binoculars but are actually counterproductive for a true bright color image.

However behind this relatively simple sounding issue lies a substantial challenge. Optical lens coatings deliver high



transmission values only for a very specific wavelength. At the same time, however, it can have adverse effects at other wavelengths on light transmission, image sharpness and depth of field. This is why higher quality binoculars require multiple layers of lens coating that together result in good performance for the most important colors. Conventional technology was able to maximize only one of the four key optical performance parameters: Either light transmission, or color fidelity, or sharpness, or depth of field. The remaining three parameters have always been compromised.

## **REVOLUTIONARY $\chi_P$ TECHNOLOGY.**

With our new  $\chi_P$ Technology – the result of many years of research – STEINER solved the puzzle. It allows for the first time to bring all key optical performance parameters to maximum levels at the same time: Without compromise. To produce these ultra-complex optical coating systems our engineers have come up with new production processes and developed a unique high-vacuum coating chamber. The end result is a true optical revolution – which you can now see.

### **Unique in light transmission and color fidelity.**

The  $\chi_P$ Technology's unique coating formula allows for

light transmission that remains equally high over the entire visible light range. I.e. there are no outlier values with their negative effects on color fidelity. These are two decisive differences that you will instantly see with your new  $\chi_P$  binoculars.

### **Crystal clear image and outstanding depth of field.**

At the same time this new optical system delivers a crystal clear, sharp image. The innovative lens design results in the highest depth of field ever seen in a roof-prism binocular. The benefit is less focusing.



## **GETTING THE MOST FROM YOUR STEINER $\chi$ P BINOCULARS.**

After years of research our engineers have created a new level of perfection with our  $\chi$ P Technology: enjoy your new STEINER  $\chi$ P binoculars. In contrast to other binoculars,  $\chi$ P Technology enabled STEINER to achieve higher light transmission over the entire visible wavelength range. A difference you will instantly see in all conditions. However, several factors determine the optical performance of a binocular. They perform to the maximum only when all these parameters are optimally calibrated and in harmony with each other.

### **Magnification**

The value indicates how much closer an object appears through the binocular. The higher the magnification, the closer the object appears. However, similar to a photographic zoom lens, a higher magnification narrows the field of view. With an 8x44 binocular, objects will appear to be eight times closer than with your naked eyes.

### **Objective lens diameter**

This number affects the objective lens surface area through which light enters the binocular. The larger the objective lens, the more light that is able to get into the binocular. Your image will be brighter at dusk, at night or in other low light conditions. With an 8x44 binocular the objective lens diameter is 44 millimeters - in contrast to the usually available 42 millimeter sizes your STEINER  $\chi$ P binocular will offer a 10% larger objective lens surface.

### **Field of view**

The size of a binocular's field of view is stated in feet or as an angle and uses the value of reference at 1,000 yards. If your binoculars offer you a field of view of 390, then you will be able to see a 390 feet wide image at the distance of 1,000 yards.



## Exit pupil

Look through your binoculars and then move it about 12 inches away from your eyes. You will see a bright circle within the oculars. This dictates how much light gets to your eye. The exit pupil is measured in millimeters (mm) and is a crucial indicator for low-light performance of a binocular. A human pupil can open up to 6 mm in low light and accordingly, binoculars that are used in low-light

### **Formula for Exit pupil:**

$$\text{Exit pupil} = \frac{\text{Objective lens Diameter}}{\text{Magnification}}$$

## Storage

When not using your STEINER  $\chi$ P binoculars you should store them in a cool dry spot. Avoid storage in spaces exposed to direct sunlight (i.e. in a car) or with extreme temperature changes.

## Cleaning

Clean your binoculars by wiping the rubber armoring with a damp cloth. More stubborn dirt may require a light soap and water solution on a damp cloth. The Nano Protection Optics of your  $\chi$ P binoculars repels dirt or water to form on the lenses – simply wipe the objective or ocular lenses gently with the cleaning cloth that came in the original box. Clean the lenses only when necessary and never use any acrid cleaning solutions.





### **YOUR NEW STEINER BINOCULARS.**

When you receive your new STEINER  $\chi_p$  binoculars, please be sure to inspect for the following:

- Make sure your binoculars show no obvious damage from shipping.
- Make sure that the Rainguard, Lens Cap and Carrying Strap are included in the box.
- Keep the original binocular packaging in case you need to ship your binoculars to us to be serviced. Use this package as an inner shipping container for your binoculars.
- Make sure you keep your original sales receipt as proof of purchase.



### **Ergonomic Eyecups**

They offer optimal protection from sidelight. We used only smooth and flexible silicone materials with our eyecups, having them adapt to your individual face shape. As an eyeglass wearer you can simply flap down the sidelight screens.



### **Nano Protection Optics®**

Protects the optical lenses especially from environmental impacts. It is highly water-repellent (hydrophobic) and allows for maximum visibility even in the worst weather conditions. Dirty binocular lenses belong to the past.



### **NPS**

#### **(Nitrogen-Pressure-System)**

The internal nitrogen filling prevents internal fogging in case of extreme temperature changes.

Only STEINER's two-valve technology provides a filling process that is gentle to all seals and reduces the oxygen content within the binoculars to an absolute minimum.

### **Comfort-Balance® Grip**

The innovative grip areas combine maximum grip with state-of-the-art ergonomic comfort. Especially during long glassing sessions the Gel-Pad Grips relieve pressure from your hands and thumbs and enable an optimal balance of your binocular.



## ADJUSTING AND USING YOUR BINOCULAR.

Adjusting the binocular to your individual preferences begins by setting the interpupillary distance. This is the distance between the pupils of your eyes. The binocular tubes pivot on a hinge, moving the tubes closer or further apart. Pivot the binocular tubes until you see a single image when looking through the binocular.

In case you have good vision and don't require vision aids such as glasses, your binocular is ready to use. You only need to make sure the diopter setting on the left ocular is on zero.

With their ergonomic eyecups all STEINER  $\chi_P$  binoculars are perfectly suited for eyeglass wearers as well. Simply twist down the eyecups and turn down the sidelight screens - no further calibration with the diopter setting is required. In case you need glasses and prefer using your binocular without wearing them you need to calibrate the binocular to your individual eye sight.

## FOCUSING YOUR PEREGRINE $\chi_P$ MODEL.

- 1.) Choose an object like a tree or a house at least 100 yards away while you have good light conditions.
- 2.) Cover the left objective with the Lens Cap and look through the binoculars with both eyes open.
- 3.) Turn the center focus wheel to make the image appear clear and sharp.
- 4.) Now cover the other objective (right side) and look through the binoculars with both eyes open.
- 5.) Turn the diopter setting wheel on your left ocular until the image appears clear and sharp.
- 6.) Your binoculars are now individually calibrated to your eyes and ready for use.

With both eyes open you can now use the focus wheel to focus the binoculars for different distances.

### **important!**

*Do not force the diopter wheel or the diopter setting beyond the noticeable stop limits. This could severely damage your binoculars.*

## COMFORTABLE ERGONOMIC EYECUPS.

Your STEINERs are equipped with newly designed, ergonomic eyecups. They play an important part in creating this unique viewing experience you will have with all X<sub>P</sub> models. As twist-up / twist-down eyecups they easily adapt to your individual preferences, whether you wear glasses or not.

**Eyeglass wearers.** Wearing glasses you have already created the necessary distance between the binoculars' oculars and your eyes. Contrary to users without glasses (or with contact lenses) you usually don't need to artificially create this distance and you can use your binoculars with both eyecups fully retracted. To retract the eyecups simply use your thumb and index finger to twist them in the direction indicated by the arrows. Then fold down the sidelight screen. When looking through your binoculars you can put your glasses directly onto the eyecups - the soft silicone material prevents scratching.

Different models of eye glasses might vary the distance between the eye and the lens and it's possible that your

eyes are too close to the ocular. You will see some black areas when looking through the binoculars. You need to increase the distance by slightly moving the eyecup (usually just a few Millimeters) until you see a clear image.

**Wearing contact lenses or no eye glasses.** You need to create a distance between your eyes and the binoculars' ocular lenses. Use the binoculars only with deployed eyecups. On both sides you will also find small screens that prevent sidelight to enter and increase image clarity.

To turn the eyecups simply use your thumb and index finger and twist the eyecups down in the direction indicated by the arrows. To twist them up, turn them in the other direction until you can feel the noticeable stop limit - after that you will only be able to minimally turn the eyecup.

This play is necessary to adjust the sidelight screen for different users' interpupillary distances.

### **important!**

*Never turn the eyecups with force beyond the noticeable stop limits. This can cause internal damage.*

## CARRYING STRAP.

Included in the box of your new binocular you will find an ergonomic carrying strap for increased comfort. Its cushion relieves your neck even after long hours of use providing maximum comfort. In addition we have coated one side with a special water-repellent neoprene material that allows for a non-slip use in any weather condition.



All STEINER  $\chi p$  binoculars are equipped with our patented **ClicLoc System**. It ensures a speedy attachment or removal of the strap. To install the strap

insert the clip - with the little nose pointing away from the binocular - into the side attachment right next to the ocular until you feel it positively click. The strap will hold firmly. To remove the strap push the circular shaped button located on the binocular strap attachment. While pushing the button pull the strap insert out of the attachment.

## RAINGUARD.

To prevent rainwater or dirt to collect on the oculars in adverse weather conditions each  $\chi p$  binocular is been equipped with a removable, water-repellent rainguard. It will also increase your binoculars' protection when stored.



It is easier to install the rainguard prior to the carrying strap. Slip the cover over the ocular side of your binoculars.

As you attach the carrying strap make sure that it goes through the rainguard's loop (see image). This way you can carry the strap around your neck and keep the oculars dry. Once you want to use the binoculars just open one of the rainguard's buttons and slip the cover off the binoculars. The rainguard is still attached to the carrying strap on the other side and will prevent you loosing it by accident.



### **STEINER BINOCULARS, SIMPLY PERFECT.**

The trust of our customers confirms the precision, robustness and functionality of our products. Your trust is very important to us, so we have equipped all  $\chi p$  models with a comprehensive 30 year warranty. It is valid for worldwide use and begins with the delivery of the binocular. Keep your original invoice and return it with the binoculars in case you ever need warranty service. When sending us your binoculars for repairs or for warranty service please take extra care to ensure sufficient cushioning

### **Pioneer Research, Inc.**

**97 Foster Road, Suite 5**

**Moorestown, NJ 08077, USA**

Please understand that we cannot guarantee basic “wear and tear” and for expendable parts like rubber armoring, lens cap, carrying strap, eyecups or rainguard.

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